A New Era for EPA Clean Water Act Tracking and Reporting with the Assessment TMDL Tracking and ImplementatioN System (ATTAINS) Redesign

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What Is ATTAINS?

- The Clean Water Act requires states, territories and tribes to monitor water quality and report to EPA every two years on waters they have evaluated (***Assessments***).

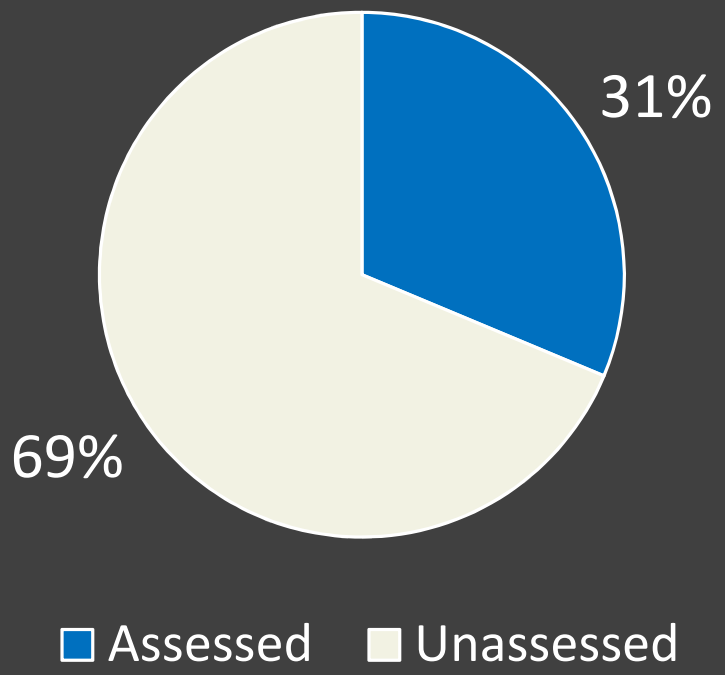
- As part of the process, waters that are threatened or too polluted to meet water quality standards are identified. These waters are called impaired (polluted enough to require ***Actions***).

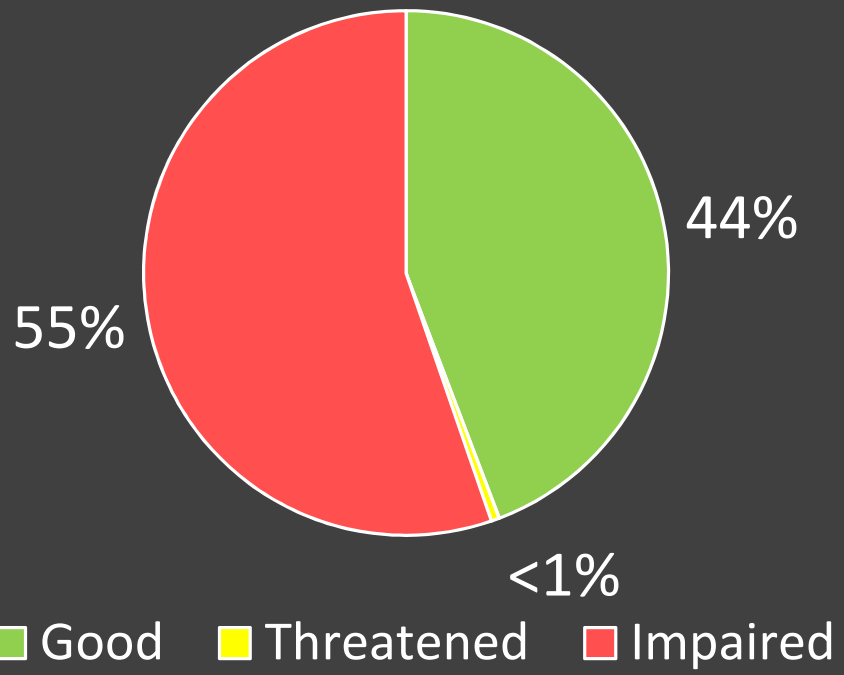
- The assessment information reported to EPA by these organizations is managed and maintained in a system called ***ATTAINS***. This system also tracks TMDLs and all these data are used in Water Quality Measures calculations. ATTAINS also make the reported water quality information available to the public.

	Rivers and Streams (miles)	Lakes, Reservoirs and Ponds (Acres)	Bays and Estuaries (Square Miles)	Coastal Shoreline (Miles)
Good Waters	487,299	5,470,004	7,611	911
Threatened Waters	5,550	34,621		
Impaired Waters	614,153	13,009,273	27,483	7,275
Total Assessed Waters	1,107,002	18,513,899	35,094	8,187
Total Waters	3,533,205	41,666,049	87,791	56,618
Percent of Waters Assessed	31.3	44.4	40.0	14.0

Assessed Waters of the United States

Source: ATTAINS (https://ofmpub.epa.gov/waters10/attains_nation_cy.control#total_assessed_waters)





Summary of Water Quality Attainment in Assessed Rivers and Streams

Source: ATTAINS (https://ofmpub.epa.gov/waters10/attains_nation_cy.control#total_assessed_waters)

Sounds like a great system - why change it?

Tools developed to facilitate Clean Water Act Reporting were state of the art at one time.

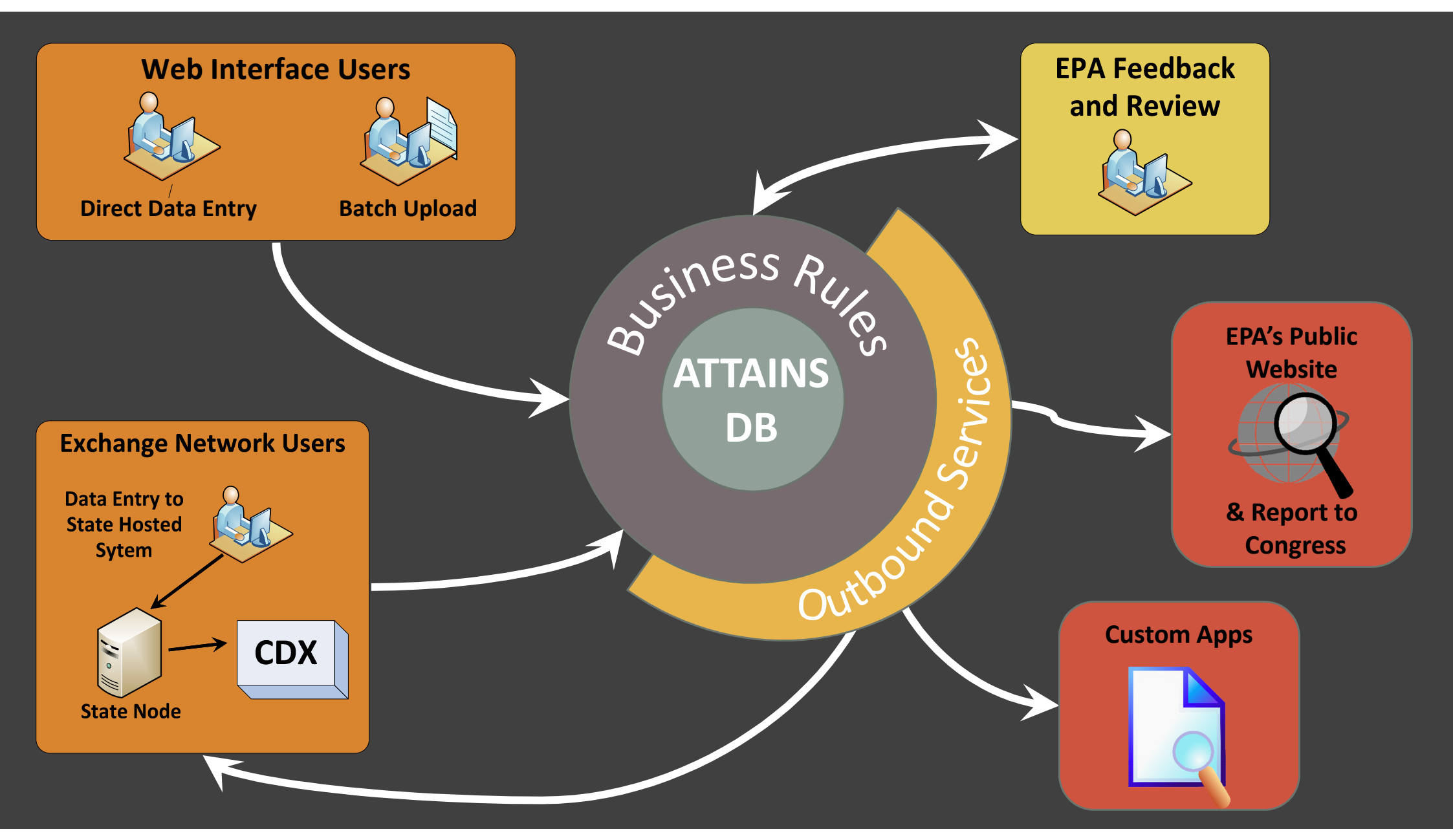
New technologies provide an opportunity to make things more streamlined.

Current

- Desktop Tool
- Manual submittal processing
- Significant LOE to validate and integrate data at national level
- Tracking between data cycles and programs can be tricky
- AUs reach indexed to NHDPlus

Redesign

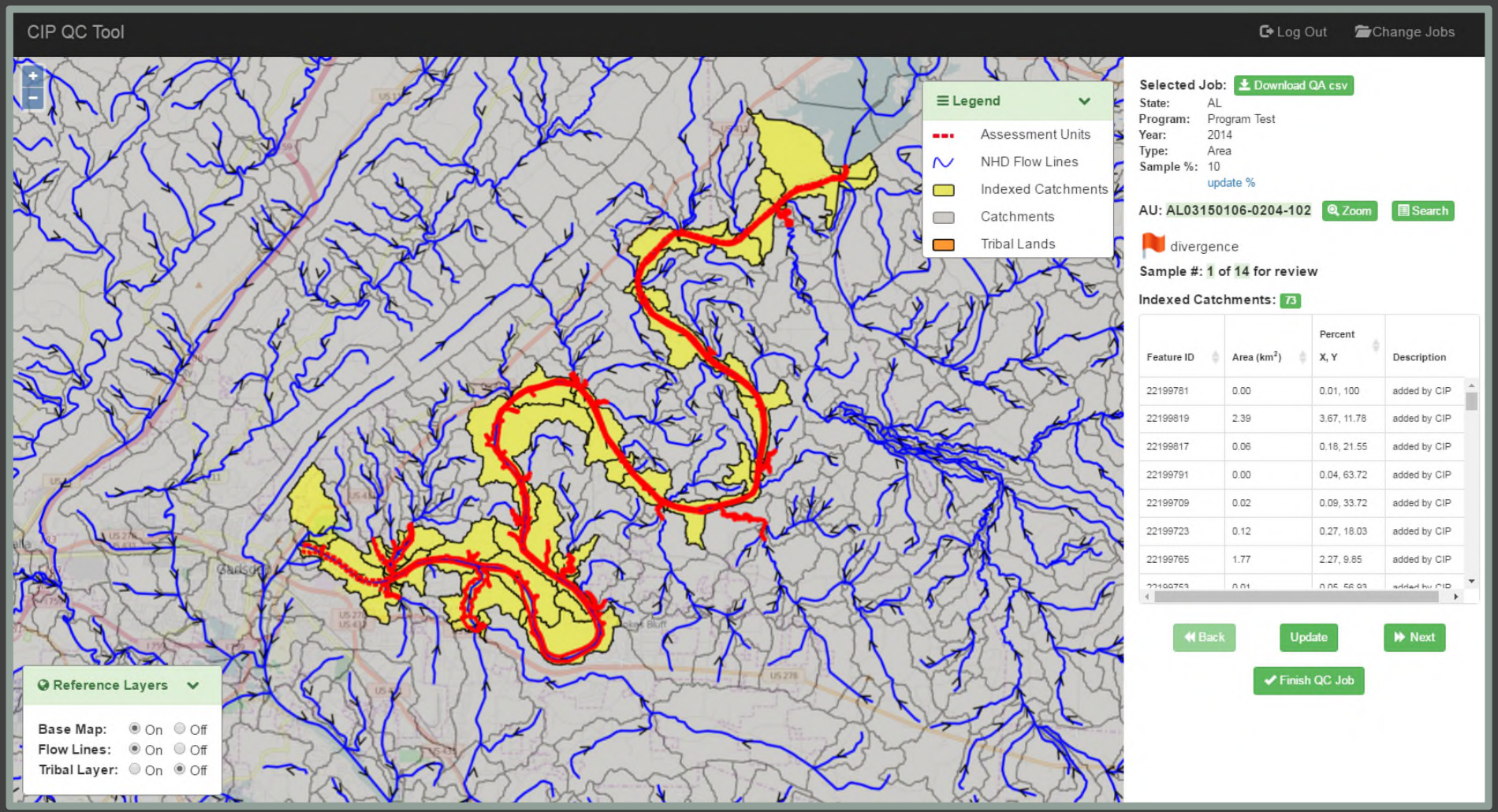
- Web-based Tool
- Robust XML Schema and Exchange Network Data Flow
- Data submitted directly into national system
- Historical tracking & program integration is built in
- AU reach indexed to NHDPlus catchments


Web Interface Users
Direct Data Entry
Batch Upload
EPA Feedback and Review
Business Rules
ATTAINS DB
Outbound Services
EPA's Public Website
& Report to Congress
Exchange Network Users
Data Entry to State Hosted Sytem
CDX
State Node
Custom Apps

Who can access the assessment data?

Owner Org	✓	✓	✓	✓	✓
EPA/ Other Orgs	O	✓	✓	✓	✓
Public	X	✓	✓	✓	✓

Visualizing the data – Catchment Indexing Process



Why is Catchment Indexing Better?

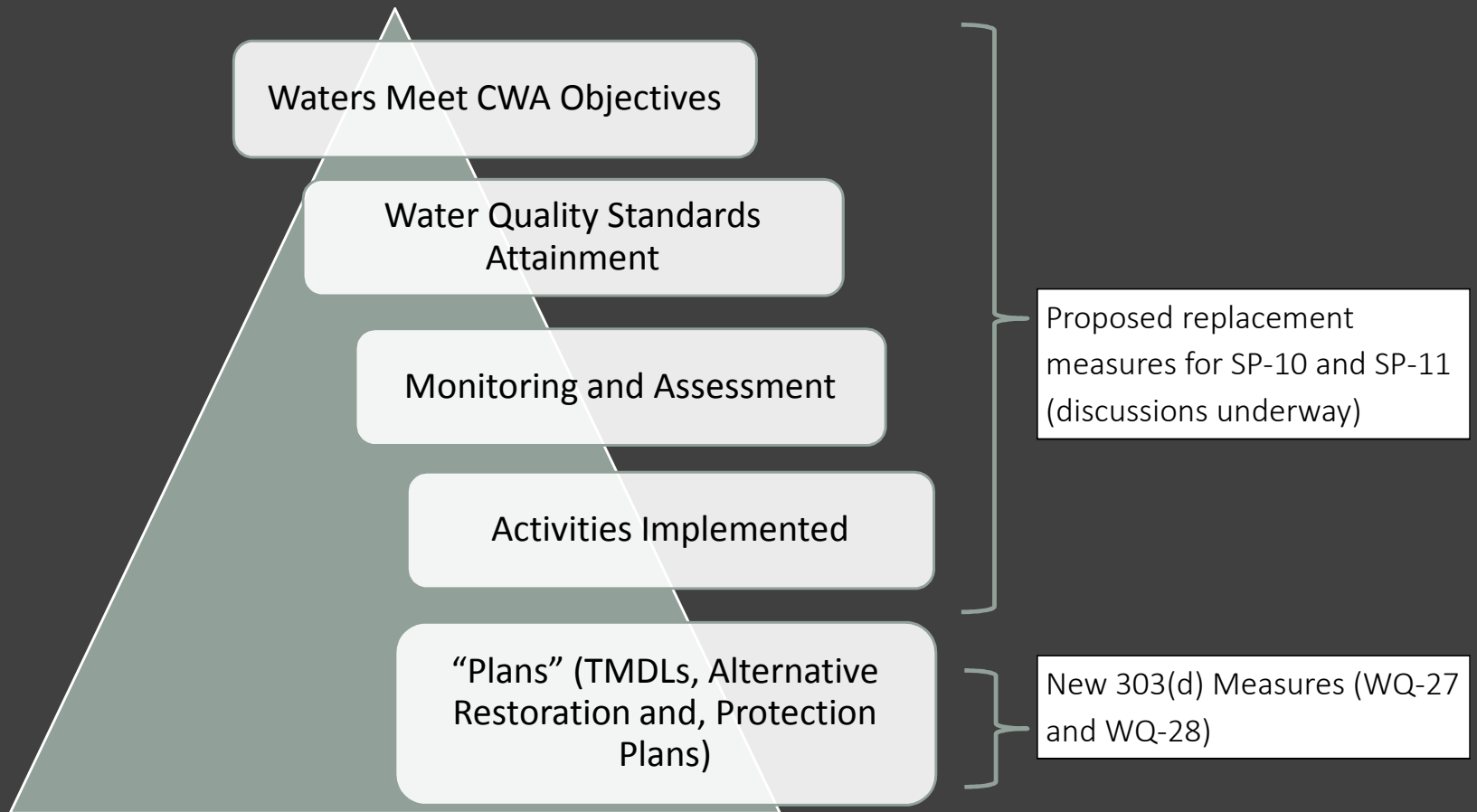
Reach Code Indexing

- Required translating State provided features to NHD.
- Time consuming to manually process, QC, and maintain.
- Less representative of States waters if they were using higher resolution hydrography.

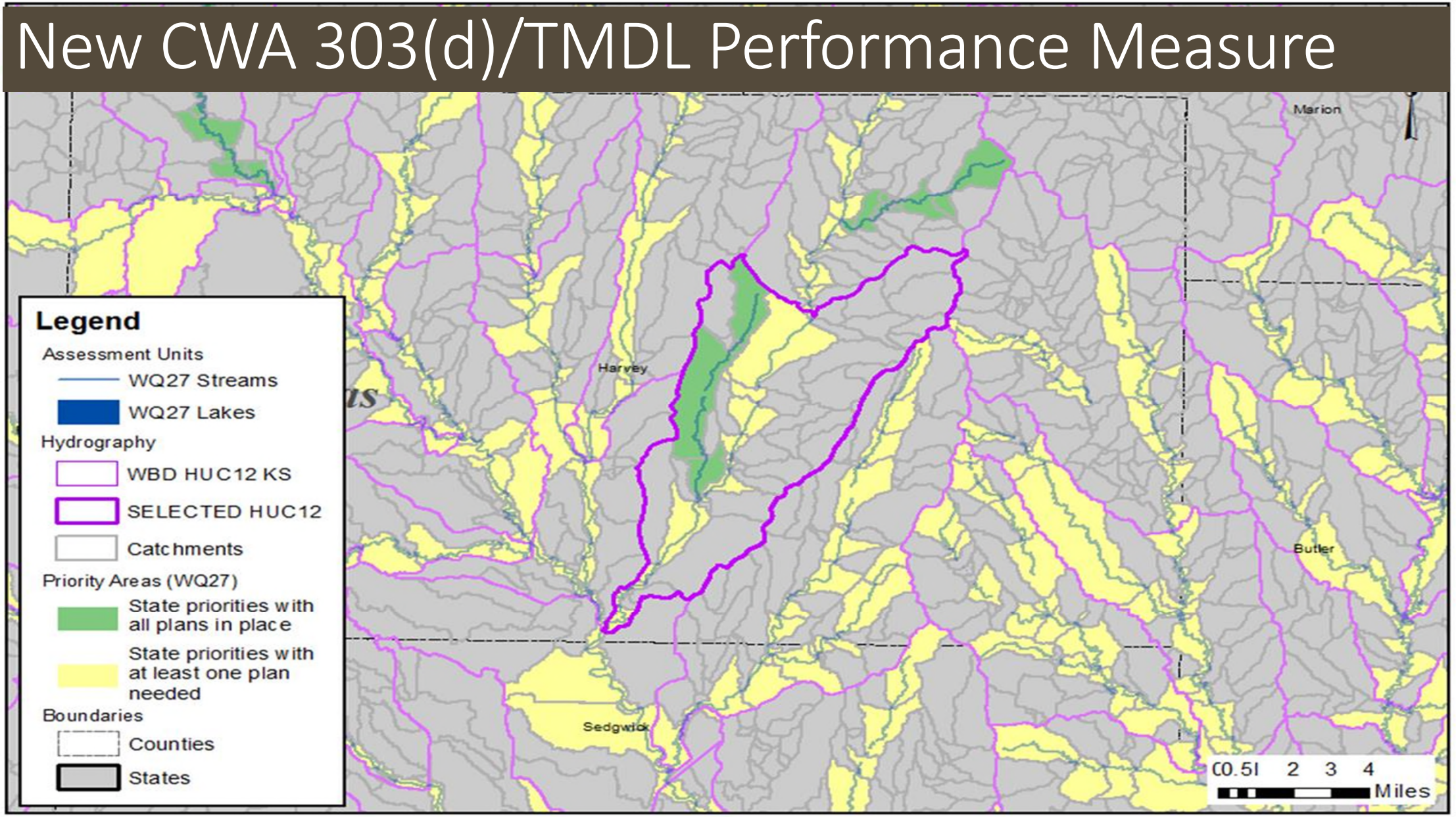
Catchment Indexing

- Features are retained as the State provided them.
- Automated processing that requires a quick QC of flagged areas.
- Catchments provide a nationally standard framework.

Taking Action and Measuring Progress!



New CWA 303(d)/TMDL Performance Measure



New CWA 303(d)/TMDL Complementary Indicator Measure

Assessment Unit Causes

Go | Actions

State	Assessment Unit ID	Assessment Unit Name	Cause Name	Plan Type
VA	VA-A02R-02-BEN	NORTH FORK CATOCTIN CREEK	BENTHIC MACROINVERTEBRATES BIOASSESSMENTS	-
VA	VA-A02R-03-BEN	SOUTH FORK CATOCTIN CREEK	BENTHIC MACROINVERTEBRATES BIOASSESSMENTS	-
VA	VA-A03R-02-BAC	CLARKS RUN	ESCHERICHIA COLI (E. COLI)	-
VA	VA-A05R-01-BEN	WANCOPIN CREEK	BENTHIC MACROINVERTEBRATES BIOASSESSMENTS	-
VA	VA-A06R-01-BEN	NORTH FORK GOOSE CREEK	BENTHIC MACROINVERTEBRATES BIOASSESSMENTS	-
VA	VA-A07R-02-BEN	NORTH FORK BEAVERDAM CREEK	BENTHIC MACROINVERTEBRATES BIOASSESSMENTS	-
VA	VA-A08R-01-PCB	BROAD RUN, DIFFICULT RUN, GOOSE CREEK, PIMMIT RUN	PCB(S) IN FISH TISSUE	-
VA	VA-A08R-03-BEN	LITTLE RIVER	BENTHIC MACROINVERTEBRATES BIOASSESSMENTS	-
VA	VA-A09R-01-BAC	UNNAMED TRIBUTARY TO THE POTOMAC RIVER	ESCHERICHIA COLI (E. COLI)	-
VA	VA-A09R-01-BEN	BROAD RUN	BENTHIC MACROINVERTEBRATES BIOASSESSMENTS	-
VA	VA-A09R-01-HG	BROAD RUN	MERCURY IN FISH TISSUE	-
VA	VA-A09R-02-BAC	BROAD RUN	ESCHERICHIA COLI (E. COLI)	-

WQ-28 Universe and Baseline Results

2010 IR Cycle	Catchment Acres
Universe area:	5,680,607.62
Baseline area (weighted):	**2,113,625.00**
Baseline percent:	**37.21%**

WQ-28 Baseline Plan Breakdown

2010 IR Cycle	Catchment Acres
Universe area:	5,680,607.62
Area with all plans in place:	467,569.46
Area with progress*:	2,221,888.07
Area with no plans in place:	2,991,150.08

Outcomes of Redesign

- Streamlined processes and submittals (less manual, more automated)
- Web and EN subject to same business rules
- More transparency
- Track results back to an official system of record
- Allow for better cross-program integration
- Faster and cheaper data processing costs for organizations and EPA

What's Next?

- The first prototype of ***ATTAINS*** will be ready for testing later this month. Contact **Dwane Young** at EPA if you'd like to participate.
- Continue to build out the ATTAINS system, specifically the user credentials and management, status workflow, and priorities.
- Work on implementation of the reports and measures - and making the calculation of these values more transparent through the ***ATTAINS*** interface.
- The data in the current ***ATTAINS*** system will be migrated into the redesigned system – so States will already have a lot of data to work with and build on.
- The system will be ready for use in time for the 2018 Integrated Reporting Cycle.

Questions?

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Thanks!